

9. *Reports on the Marine Mollusca in the Collections of the South African Museum.* VI-VIII.—By J. R. LE B. TOMLIN, M.A.

(With 10 Text-figures.)

VI. FAMILY FASCIOLARIIDAE.

I HAVE seen very few examples of the genus *Fasciolaria* from South Africa. Sowerby is responsible for the solitary record of the common Indo-Pacific *F. filamentosa* Lam. from Durban, and that of *F. trapezium* L. from Natal.

F. badia Krauss is a synonym of Reeve's *lugubris*, described in the previous year. Of *F. heyneimanni* Dunker much more material is required to determine its variability.

Attention may be called to two species described by Strebel in *Mitteil. aus dem Naturh. Museum*, xxviii, pp. 31 and 33 (*Jahrb. Hamburg. Wiss. Anstalt.*, xxviii): one called *F. dunkeri* from Elim is a very young shell which will probably prove eventually to be the young of some larger, known species; the other, *F. scholvieni*, is a fine shell, over 6 inches in length and $2\frac{1}{2}$ inches in breadth, labelled "Cape." Both are in the Scholvien collection.

The South African Museum has a fine, dead shell even larger than this, though it has lost 2 or 3 of the apical whorls, dredged on the Agulhas Bank.

This is a perfectly distinct species from *F. scholvieni*, and I propose to call it

Fasciolaria agulhasensis n. sp.

It is a large solid shell, with traces of a brownish periostracum, 8 (remaining) whorls, columella much arched, and a long canal some 7 mm. broad.

The whorls are regularly sculptured with spiral ridges which vary a good deal in breadth and strength; as a rule the stronger and weaker spirals are alternate, but at times two weaker ones come together; there is a particularly strong peripheral ridge on the body-whorl, and an equally strong one 7 mm. above, which becomes an obtuse central keel on the upper whorls.

Aperture elliptical in shape.

Long. $7\frac{1}{8}$ inches; diam. max. $3\frac{3}{16}$ inches.

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Hab. Agulhas Bank, 28 fathoms (S.A. Mus., No. A6539).

The canal is not quite perfect, and is somewhat bent to the right abnormally, owing to an injury.

It differs from *F. scholvi* especially in the shape of the aperture and in the character of the spiral sculpture. In general appearance it is not unlike some specimens of *Hemifusus morio* (L.), but that



FIG. 1.—*Fasciolaria agulhasensis* n. sp.

shell, of course, has not the columellar plaits that distinguish a *Fasciolaria*.

Latirus mosseleensis n. sp.

Shell turreted, fusiform, rimate, with spire produced; whorls eleven in number, acutely nodulous a little below the middle of each whorl, with an additional row of much weaker nodules below the periphery of the body-whorl; canal long and quite straight; colour of periostracum brownish terracotta, columella and interior bright

pinkish; columella quite straight, with two plaits obscure and only just traceable; the length of aperture and canal is almost exactly half the total length.

Long. 53.5 mm.; diam. max. 23 mm.

Hab. off Mossel Bay, 27 fathoms, two live specimens (S.A. Mus., No. A3504).

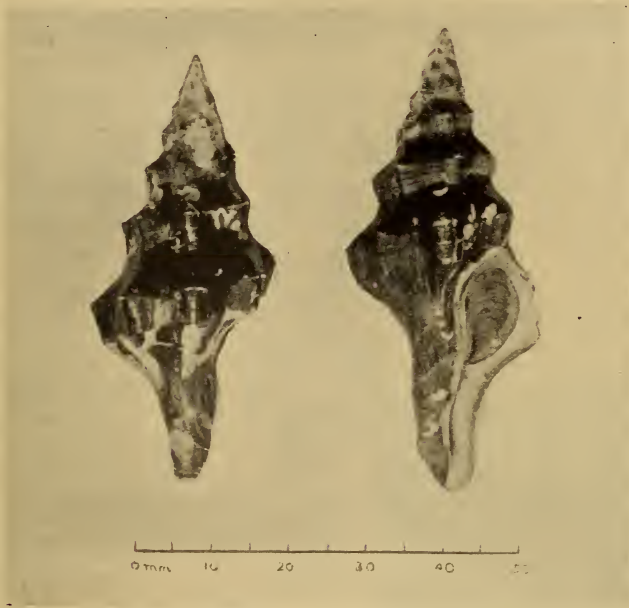


FIG. 2.—*Latirus mosselensis* n. sp. Type on left, paratype on right.

This fine species has somewhat the build of *L. armatus* A. Ad., but is much larger with a longer canal; the surface is noticeably smooth but for the nodules, which are below the periphery of each whorl instead of above as in *armatus*.

The operculum is typically Fasciolariid, pear-shaped, pointed at the apex with apical nucleus; colour light-brown; narrowly concave on the columellar side; growth-lines very numerous and regularly semicircular.

VII. FAMILY FISSURELLIDAE.

A very considerable number of species has been described or recorded, under the generic heading of "Fissurella," from the Cape.

Most of these belong to the genus *Diodora* Gray, of which the

genotype is an English species, *D. apertura* (Montagu)—a shell of very much the same appearance as *D. australis* (Krauss).

The list includes several doubtful names, and has been materially increased by misidentifications.

One species, *Fissurella robusta* Sowerby, described from Port Elizabeth on a single imperfect specimen, has all the appearance of a fossil, and should, I think, be omitted from the list of recent species.

F. conioides (Reeve) was erroneously described as a Cape species : it is endemic in the Cape Verde Isles.

Gmelin's *Patella caffra* is a *Fissurella*, but unlike any South African species, though assigned by its author to the Cape of Good Hope. It has never been certainly identified, and is omitted from the Manual of Conchology, vol. xii. The figure on which it is based looks like one of the true *Fissurellas* from South America, especially as it is said to have a dark border inside.

D. fumata (Reeve) is another name which we may reject. It was described from an unknown locality, but is identical with the Caribbean *alternata* Say. The South African records were doubtless based on shells of *elevata* Philippi. It seems rather unwise of Boog Watson, in the Challenger Report, p. 34, to have assigned his unidentifiable, broken shell from Sea Point to any definite specific name, even with a query.

D. cruciata (Krauss) is preoccupied by a species of Gould's from the East, and has been renamed *crucifera* Pilsbry. I have seen examples of this in the collection of the S.A. Museum from Tongaat, Natal.

D. australis (Krauss). The S.A. Museum has this from Port Elizabeth and Delagoa Bay.

Gen. FISSURIDEA Swainson.

The type of this group, *F. galeata* (Helbling), is the only species given in Tryon's Manual. It is characterised by a very small perforation which opens forward rather than upward, while the apex of the shell leans forward and tends to overhang the anterior margin. It is a species of the Far East.

Fissurella parviforata Sowerby* is evidently closely related to *galeata* Helbling, while it has the foramen still smaller and the apex still further forward. I therefore transfer it to the genus *Fissuridea*.

Bartsch in the Turton Report † placed six species in *Fissuridea*, but I regard the first five as belonging to *Diodora*.

* Journ. of Conch., vi, p. 12, pl. i, fig. 7, 1889.

† U.S. Nat. Mus. Bull. 91, p. 177, 1915.

F. parviforata Sow. was described from Port Elizabeth: the S.A. Museum has it from Mossel Bay and Kalk Bay. I have received it from Ascension Island, and the specimens from St. Helena identified doubtfully by Smith * as *gibberula* Lam. ? belong to *parviforata*.

Gen. MACHROCHISMA Swainson.

The single South African species belonging to this genus (which Swainson spelt as above) has usually been assigned to *M. producta* A. Ad., and though Sowerby identified different specimens at various times as *producta* A. Ad. and *compressa* A. Ad., I have but little hesitation in thinking that all belonged to a single form.

I fail to see, however, why it was ever identified with the Australian forms, and proceed to describe it as

Machrochisma africana n. sp.

The shell is rather broadly rectangular, the length being a little more than twice the breadth, and the two ends are almost similarly rounded; the slit is half the total length of the shell, narrowing rather gradually from the margin, which is noticeably depressed and strongly thickened at the broad end of the slit; in colour it is rather vaguely blotched and streaked with red on a light ground; the sculpture consists of fine, regular ridges radiating downwards from the slit to the margin all round, with somewhat irregular concentric growth-lines which produce beading where they cross the ridges.

Long. 22 mm.; diam. max. 10 mm.

Hab. Port Alfred (Becker).

A young shell from the same locality measures 10×4.5 , thus maintaining practically the same proportions.

The S.A. Museum has specimens from Scottburgh (Burnup). It



FIG. 3.—*Machrochisma africana* n. sp.

* P.Z.S. Lond., 1890, p. 295.

is also reported from Port Elizabeth, from Umvoti, and from Pondoland.

M. producta A. Ad. differs from *M. africana* by its more acutely saddle-shaped form and by its very different shape; thus a typical South Australian example measures 25×8 , and another 24×8 .

Gen. EMARGINULA Lamarck.

The first and only record of this genus from South Africa will be found in Ann. Natal Museum, vol. ii, pt. ii, p. 209, where Smith records from Tongaat *E. micans* A. Adams, which was originally described from Rains Island. I have not seen this Tongaat shell, but from the explanations necessary to fit it into *micans* one is very much tempted to suspect that it will eventually prove distinct.

The following fine deep-water species is not a perfect shell, but the sculpture is so very clear, fresh, and perfect that there can be no difficulty in recognising it again with the aid of the excellent photograph now given.



FIG. 4.—*Emarginula pulchreclathrata*
n. sp.

arrangement constitutes a very marked and beautiful piece of lattice-work.

The apex is bent over to form a small hooked beak.

Long. 19 mm. ; lat. 12.5 mm.

Hab. off Saldanha Bay in 55 fathoms (S.A. Mus., No. A3617).

Emarginula pulchreclathrata n. sp.

A fine species, somewhat similar in size and form to *E. sicula* Gray from the Mediterranean and to *E. superba* Hedley from Tasmania, but differing from both in sculpture. The South African shell has a series of alternately stronger and weaker ridges radiating from apex to margin, crossed nodosely by concentric threads; both stronger and weaker ridges vary somewhat in degree, and as a rule the weaker ones first appear some little distance below the apex; the whole

Gen. PARMAPHORELLA Strebel.

In 1907 Strebel * described an Antarctic shell as *Tugalia antarctica*, and mentioned that it had long been in the Hamburg Museum with the MS. name of *Parmaphorella antarctica*, given by Pfeffer. While recognising that there was a good deal to be said for Pfeffer's suggestion of making it the type of a new genus, Strebel eventually decided to class the shell in *Tugalia*, owing to its very worn and weathered condition.

In 1907 also, but later than Strebel, Melvill and Standen † likewise described a *Tugalia antarctica* from the collections of the Scottish National Antarctic Expedition. This was a shell of very similar character to Strebel's *antarctica*, though specifically distinct. It was renamed *T. melvilli* by Thiele in 1912.‡

I do not think that there can be any doubt that these two forms, together with a third which is obviously congeneric and now to be described, constitute a genus distinct from *Tugalia*, and that Pfeffer was right in his suggestion.

Strebel only mentions the existence of this label to reject it as far as the generic part is concerned, but I suppose that this constitutes publication, however paradoxical the situation, and that *Parmaphorella* must be credited to Strebel, the genotype being *Tugalia antarctica* Strebel.

The shell of *Parmaphorella* has all the facies of a deep-water mollusc in its thinness and coloration; it is much more convex than *Tugalia* and has the apex prolonged into a regular hooked beak, hollow within, which almost overhangs the margin.

There is a rather ill-defined anal notch from which a shallow, well-marked groove within runs right up to the apex, with an enlarged, conspicuous, external rib corresponding to the groove. The posterior margin is moderately flattened out into a sort of flange, rather in the manner of the genus *Plesiothyreus* Cossmann, though to a less degree. The sculpture of *Parmaphorella* is much finer than that of *Tugalia*, and variously differentiated on the external anal rib; thus in *P. melvilli* (Thiele) the original figure, cited above, correctly shows this rib at least twice the breadth of the others and regularly crossed by the concentric striae. In *Tugalia* there is no alteration of sculpture to mark the anal rib.

* Zool. Jahrb., xxv, p. 105, pl. ii, fig. 26, a-e, 29/8/1907.

† Trans. Roy. Soc. Edin., xlvi, p. 128, fig. 1, 21/12/1907.

‡ Deutsche Südpolar Exp., xiii, p. 197, pl. xii, fig. 6.

Parmaphorella barnardi n. sp.

Shell thin, white, convex, oblong; apex at the posterior end produced in the form of a hollow beak very nearly to the posterior margin, which is somewhat splayed out to form a sort of flange; anterior margin distinctly grooved, the groove running within right up to the apex, and marked outside by a corresponding, outstanding rib, broad at the base and narrowing by degrees to quite a sharp keel on the apex; surface cancellated throughout, the concentric striae being the stronger, except at the posterior end, and rather rough and irregular.

Long. 19 mm.; diam. max. 12 mm.

Hab. Cape Point, N. 50° E., 18 miles, 180 fathoms, a dead shell (S.A. Mus., No. A3623).



FIG. 5.—*Parmaphorella barnardi* n. sp.

Another specimen from same locality, with apex broken, measures 21 × 15 mm.

Named in honour of Dr. K. H. Barnard, the Assistant Director of the South African Museum.

VIII. FAMILY BUCCINIDAE.

Gen. GLYPTEUTHRIA Strebel.

Until 1905 the genus *Euthria* Gray included a small but rather varied assemblage of species mainly from the Magellanic province and from New Zealand, with stragglers up the Pacific coast of America right away to Japan. It has as its type the well-known Mediterranean *Murex corneus* of Linné, a solid, nearly smooth shell with the upper part of each whorl much appressed, the canal long and recurved, while the operculum is oval with apical nucleus.

Strebel* distributed his Magellanic material into 3 new subgenera, *Pareuthria*, *Glypteuthria*, and *Anomacme*, and it may be well here to fix *E. meridionalis* Smith as the type of *Glypteuthria*, and *Fusus plumbeus* Philippi as the type of *Pareuthria*. The third subgenus is monotypical. All the species assigned to these three groups agree in having a very short, incipient canal and a normal Euthriid operculum.

* Zool. Jahrb. (Syst.), xxii, pp. 600, 627, 633.

I have no hesitation in following Thiele * in raising *Glypteuthria* to generic rank.

It contains a homogeneous group of species which are characterised by their more obvious sculpture, in which axial ribs and spiral cords play a fairly equal part; this sculpture begins early, though according to Strebel the protoconch is smooth. In all the examples before me the apex is badly worn.

The South African Museum has dredged two forms in deep water that I regard as belonging to this genus, and they are described below.

Glypteuthria capensis n. sp.

Shell elongate, solid, of a dirty white colour, seven-whorled; sculpture consisting of numerous regular, curved, axial ribs, about sixteen

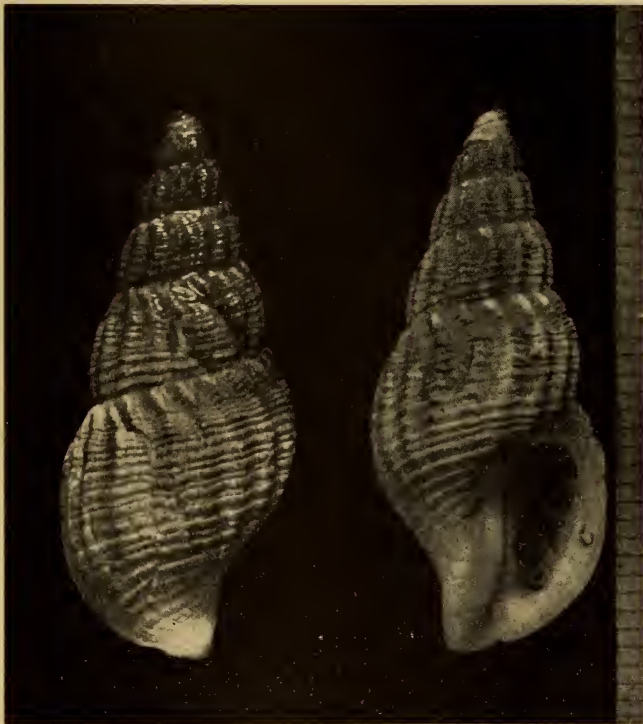


FIG. 6.—*Glypteuthria capensis* n. sp.

in number on the body-whorl, and of close spiral cords which vary a good deal in degree and are noticeably finer immediately below the

* Handb. Syst. Weichtierkunde, pt. i, p. 318, 1929.

suture ; aperture elongate, more than twice as long as broad ; canal broad and short, very slightly recurved ; columella deeply excavate ; operculum that of a normal *Euthria*.

Long. 29 mm. ; diam. max. 12 mm.

Aperture, 12×5.5 mm.

Hab. Cape Point, N. 41° E., 38 miles, 318–400 fathoms (S.A. Mus., No. A3446), several living examples.

Glypteuthria solidissima n. sp.

Shell elongate, very strong and solid, greyish white ; whorls convex, seven (?) in number (the apex being decollate) ; sculpture consisting of numerous straight axial ribs which only reach the upper part of the body-whorl above the periphery—on the penultimate



FIG. 7.—*Glypteuthria solidissima* n. sp.

whorl there are about 18, and of fairly close spiral cords alternating with a varying number of finer threads ; there are about 12 of these cords on the body-whorl, and the 4 or 5 uppermost ones are irregularly interrupted by the axial ribs ; suture impressed ; columella deeply excavate ; canal rather long and recurved ; aperture long oval, denticulate within.

Long. 27 mm. ; diam. max. 12.5 mm.

Aperture, 8×4 mm.

Hab. off Cape Point, 11 miles, in 45 fathoms, one example (S.A. Mus., No. A3543).

This differs from *G. capensis* in sculpture, in the form of the canal, and in the convexity of the whorls.

In addition to the above the South African Museum has three species, all new, which do not seem referable to any established genus or section. These three constitute a homogeneous little group of nearly related forms, which I feel sure ought to be placed in proximity to *Euthria* and its allies, though unluckily the soft parts and operculum are missing in every specimen.

All three are abyssal; in the case of one species exact data are lacking, but it has the unmistakable facies of a deep-water shell, and is known to have occurred, like the other two, in the dredgings of the "Pieter Faure."

The three species are of an extremely graceful attenuate form, reminding one not a little of the palaeartic species of *Colus* Röding (*Sipho* auct.); the shells are finely and closely spirally grooved, white, covered with a very thin, delicate, shiny periostracum which is slightly cream-tinted; canal broad and short; aperture rather less than half the length of the shell.

For this little group I propose the genus *Charitodoron* * as a new group of the Buccinidae, and name the three species after Hesiod's version of the names of the three Graces—Euphrosyne, Aglaia, and Thalia.

The genotype is *C. euphrosyne*, which I proceed to describe.

Charitodoron euphrosyne gen. et sp. nov.

Shell gracefully elongate, spindle-shaped, white with very pale yellowish periostracum, marked longitudinally with numerous inconspicuous, irregularly spaced ribs; whorls 7, regularly spirally lirate with shallow punctate striae, there being 9 striae on the penultimate and on the antepenultimate whorl; below the periphery of the last whorl are numerous furrows, much deeper and broader than those on the rest of the shell; canal broad and very short; aperture elongate oval.

Long. 27 mm.; diam. max. 9 mm.

Aperture: long. 11 mm.; lat. 4.5 mm.

* "Gift of the Graces."



FIG. 8.—*Charitodoron euprosyne*
n.g., n. sp.



FIG. 9.—*Charitodoron aglaia* n. sp.



FIG. 10.—*Charitodoron thalia* n. sp.

Hab. off Cape Point in 660–700 fathoms, two examples (S.A. Mus., No. A3441).

At least one whorl is missing in both examples of this species.

Charitodoron aglaia n. sp.

Bears considerable resemblance to the last species, but has 9 whorls, is obviously more slender, and has a more decidedly yellowish periostracum, which is thicker, and on the last 4 whorls makes the spiral striae all but indiscernible; on the earlier whorls the striae are evident, strong, and punctate; the longitudinal ribs or growth-lines are weaker and much more inconspicuous than those in *euphrosyne*; the body-whorl is furrowed only on the lower half of the infra-peripheral area.

Long. 26 mm.; diam. max. 8 mm.

Aperture: long 11 mm.; lat. 3.5 mm.

Hab. South Africa, two examples (S.A. Mus., No. A3440).

Details as to the habitat of this species are unfortunately lacking.

Charitodoron thalia n. sp.

The third species differs materially from the two already described; in form it is quite reminiscent of the palaeartic *Colus propinquus* (Alder). It has 8 whorls, but is not so elongate as the other two and increases more rapidly in diameter; the longitudinals are very fine, numerous, and strongly arcuate; the spiral lirae are more obvious through the periostracum, stronger throughout, and not punctate—11 or 12 in number on each whorl; the body-whorl is regularly lirate throughout, the lirae becoming broader and coarser below the periphery; canal slightly narrower and longer; aperture much as in *C. aglaia*.

Long. 21 mm.; diam. max. 8 mm.

Aperture: long. 9 mm.; lat. 3 mm.

Hab. off Cape Point in 131 fathoms, one example (S.A. Mus., No. A1742).

I ought to say that the Museum is very much indebted to Mr. A. E. Salisbury for almost all the photographs here used.